

What is claimed is:

1. A mobile communication system comprising:

a base station;

5 a mobile station having either one of or both of an individual channel set to said base station, and a shared channel set to said base station shared with other mobile stations for transmitting data from said base station; and

10 a transmission power control device for controlling a sum of transmission powers from said base station to said mobile stations to approximately constant.

2. The mobile communication system according to claim 1, wherein said transmission power control device maintains a sum of transmission powers for said shared channel, and for said individual channels at said constant power.

15 3. The mobile communication system according to claim 1, wherein said transmission power control device sets the transmission power for said shared channel to said constant power when there exists no individual channel.

20 4. The mobile communication system according to claim 1, wherein said transmission power control device respectively increases/decreases the transmission power for said shared channel according to an increased/decreased transmission power because of an increase/decrease of said individual channels.

25 5. The mobile communication system according to claim 4, wherein said transmission power control device respectively increases/decreases the transmission power for said shared channel by an average transmission power of the

6. The mobile communication system according to claim 1, wherein if the sum of said transmission powers is larger than an upper limit, said transmission power control device decreases the transmission power for said shared channel by a difference between said sum and said upper limit.

8. The mobile communication system according to claim 1, wherein said transmission power control device is provided in said base station.

10. A transmission power control method for a base station of a mobile communication system including a base station, and a mobile station having either one of or both of an individual channel set to said base station, and a shared channel set to said base station shared with other

mobile stations for transmitting data from said base station,
said method comprising,

a transmission power control step for controlling a
sum of transmission powers from said base station to said
5 mobile stations to approximately constant.

11. The transmission power control method according to
claim 10 wherein said transmission power control step
maintains a sum of transmission powers for said shared
channel, and for said individual channels at said constant
10 power.

12. The transmission power control method according to
claim 10, wherein said transmission power control step sets
the transmission power for said shared channel to said
constant power when there exists no individual channel.

13. The transmission power control method according to
claim 10, wherein said transmission power control step
respectively increases/decreases the transmission power for
said shared channel according to an increased/decreased
transmission power because of an increase/decrease of said
15 individual channels.

14. The transmission power control method according to
claim 13, wherein said transmission power control step
respectively increases/decreases the transmission power for
said shared channel by an average transmission power of the
individual channels for an increase/decrease of one
25 individual channel.

15. The transmission power control method according to
claim 10, wherein if the sum of said transmission powers is

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larger than an upper limit, said transmission power control step decreases the transmission power for said shared channel by a difference between said sum and said upper limit.

5 16. The transmission power control method according to claim 10, wherein if the sum of said transmission powers is lower than a lower limit, said transmission power control step increases the transmission power for said shared channel by a difference between said sum and said lower
10 limit.

 17. The transmission power control method according to claim 10, wherein said transmission power control step is conducted in said base station.

 18. The transmission power control method according to
15 claim 10, wherein the mobile communication system further comprises a base station control station for controlling said base station, further comprising steps of:

 reporting information for said transmission power control to said base station control station in said base
20 station;

 notifying setting information on the transmission power for said shared channel based on the reported information in said base station control station; and

 conducting said transmission power control according
25 to this notified information in said base station.

 19. A base station for setting either one of or both of an individual channel with a mobile station and a shared channel shared with other mobile stations for transmitting

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data from the mobile station, comprising;

a transmission power control device for controlling a sum of said transmission powers to said mobile stations to approximately constant.

5 20. The base station according to claim 19, wherein said transmission power control device maintains a sum of transmission powers for said shared channel, and for said individual channels at said constant power.

10 21. The base station according to claim 19, wherein said transmission power control device sets the transmission power for said shared channel to said constant power when there exists no individual channel.

15 22. The base station according to claim 19, wherein said transmission power control device respectively increases/decreases the transmission power for said shared channel according to an increased/decreased transmission power because of an increase/decrease of said individual channels.

20 23. The base station according to claim 22, wherein said transmission power control device respectively increases/decreases the transmission power for said shared channel by an average transmission power of the individual channels for an increase/decrease of one individual channel.

25 24. The base station according to claim 19, wherein if the sum of said transmission powers is larger than an upper limit, said transmission power control device decreases the transmission power for said shared channel by a difference between said sum and said upper limit.

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25. The base station according to any one of claim 19,
wherein if the sum of said transmission powers is lower than
a lower limit, said transmission power control device
increases the transmission power for said shared channel by
5 a difference between said sum and the lower limit.

26. A program for making a computer execute a process
for a transmission power control method for a base station
of a mobile communication system including a base station,
and a mobile station having either one of or both of an
10 individual channel set to said base station, and a shared
channel set to said base station shared with other mobile
stations for transmitting data from said base station
comprising a transmission power control step for controlling
a sum of transmission powers from said base station to said
15 mobile stations to approximately constant.

27. The program according to claim 26, wherein said
transmission power control step maintains a sum of
transmission powers for said shared channel, and for said
individual channels at said constant power.

28. The program according to claim 26, wherein said
transmission power control step sets the transmission power
for said shared channel to said constant power when there
exists no individual channel.

29. The program according to claim 26, wherein said
25 transmission power control step respectively
increases/decreases the transmission power for said shared
channel according to an increased/decreased transmission
power because of an increase/decrease of said individual

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channels.

30. The program according to claim 29, wherein said
transmission power control step respectively
increases/decreases the transmission power for said shared
5 channel by an average transmission power of the individual
channels for an increase/decrease of one individual channel.

31. The program according to claim 26, wherein if the
sum of said transmission powers is larger than an upper
limit, said transmission power control step decreases the
10 transmission power for said shared channel by a difference
between said sum and said upper limit.

32. The program according to claim 26, wherein if the
sum of said transmission powers is lower than a lower limit,
said transmission power control step increases the
15 transmission power for said shared channel by a difference
between said sum and said lower limit.

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